

# TRANSCRIPT OF PROCEEDINGS

MAR 10 2010  
FCC Mail Room

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IN THE MATTER OF: )  
 )  
EMERGENCY RESPONSE )  
INTEROPERABILITY CENTER )  
PUBLIC FORUM )

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Date: March 2, 2010

## HERITAGE REPORTING CORPORATION

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MAR 10 2010  
FCC Mail Room

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

IN THE MATTER OF: )  
 )  
EMERGENCY RESPONSE )  
INTEROPERABILITY CENTER )  
PUBLIC FORUM )

Commission Meeting Room  
FCC Building  
445 12th Street, S.W.  
Washington, D.C.

Tuesday,  
March 2, 2010

The parties met, pursuant to notice, at  
2:00 p.m.

BEFORE: JENNIFER MANNER, Deputy Chief, Public  
Safety and Homeland Security Bureau

APPEARANCES:

JAMES ARDEN BARNETT, Jr., Rear Admiral (Ret.),  
Chief, Public Safety and Homeland Security  
Bureau

CHRIS ESSID, Director, Office of Emergency  
Communications,

DHS Jeffery Goldthorp, Chief, Communications  
Systems Analysis Division, PSHSB

DERECK ORR, Program Manager for Public Safety  
Communications, Office of Law Enforcement  
Standards, NIST

ZIAD SLEEM, Associate Division Chief, WTB  
Spectrum and Competition Policy Division

## APPEARANCES ( CONT'D )

Registered Speakers:

HARLIN MCEWIN, PSST/IACP  
BILL CARROW, APCO  
CYNTHIA COLE, Cynergyze Consulting  
JONATHAN DELONG, Zos Communications  
STEPHEN VERBIL, Emergency Telecommunications  
Manager, CT. DPS  
GIL ARMENDARIZ, Chairman, Sy Tech Corp  
JOHN DOHERTY, VP Engineering, GEOCommand  
PRUDENCE PARKS, Utilities Telecom Council  
STEVE O'CONOR, NENA (First VP)  
KEVIN FOOTE, Director, National Emergency  
Internet Deflection System  
STACEY BLACK, AT&T

P R O C E E D I N G S

(2:00 p.m.)

MR. BARNETT: Good afternoon. My name is Jamie Barnett, I'm the Chief of the Public Safety and Homeland Security Bureau here at the FCC, and we really appreciate your presence here to talk today about the creation and the functions of the Emergency Response Interoperability Center, or ERIC. The fact that the acronym is ERIC is purely coincidental that Jennifer Manner's husband's name is Eric, it was not named after him.

But we are excited about the possibilities of what this center can do. Now, I'd like take this opportunity to thank our partners in this endeavor, and truly it has been a partnership in coming up with the concept, particularly the Department of Homeland Security Office of Emergency Communications, NIST, and the Department of Justice. We're excited about these partnerships and the collaborations developed among our agencies, and we're looking forward to working together on these challenging and crucial public safety issues.

Now, today's forum is important because even though there is a consensus on the overarching ERIC concept there are still many details to be worked out.

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1 Your input today and in the future, quite frankly,  
2 will help us especially in developing the architecture  
3 of ERIC, will help us identify the issues that need to  
4 be resolved, gaps that need to be filled, and  
5 obstacles that we need to overcome.

6 Our vision for ERIC is that it will become  
7 part of the nationwide public safety communications  
8 structure. We're not looking for it to replace any  
9 agency or entity that currently is in place, we're  
10 simply looking to assist an already vibrant community  
11 that's working day in and day out to improve public  
12 safety communications. ERIC will enhance efforts to  
13 move public safety communications forward as we strive  
14 to implement broadband technologies and innovations.

15 In addition, ERIC will facilitate a focused  
16 approach as we work towards creating and implementing  
17 a nationwide wireless public safety broadband network.  
18 It will strive to develop common technical standards  
19 for interoperability on the public safety broadband  
20 network from the start and to update these standards  
21 periodically as broadband technologies evolve. It is  
22 important that we get this network right from day one,  
23 and I've emphasized over and over again we really get  
24 one shot at this, one at-bat, one swing to make sure  
25 that we get it right. Having an entity totally focus

1 on this will help us achieve that goal.

2 Today we hope to touch on the following  
3 topics. Technical requirements for public safety  
4 broadband networks to ensure interoperability, roaming  
5 for frameworks for public safety users, and priority  
6 access for public safety users. This of course isn't  
7 an all inclusive list, but these are important topics  
8 which we want to stay focused on as much as possible  
9 today. I realize there are other things we could be  
10 talking about.

11 Again, thank you for taking the time to be  
12 with us today in person. With those of you who are on  
13 the web, we appreciate your interest in improving  
14 communications for our nation's first responders. The  
15 importance of reliable, interoperable, ubiquitous  
16 communication for public safety cannot be overstated.  
17 Now I'd like to turn it over, the podium, to Chris  
18 Essid, the Director of DHS's Office of Emergency  
19 Communications, for his comments. And once again,  
20 Chris, thank you for your strong partnership with us.

21 MR. ESSID: Good afternoon, Jamie, and  
22 thanks for having me here. I've been the Director of  
23 the Office of Emergency Communications within the  
24 Department of Homeland Security for the last two  
25 years. Before this job I served as Virginia's

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1 Commonwealth Interoperability Coordinator in the  
2 Governor's Office, and what seems like a lifetime ago  
3 I was in the U.S. Army as a Military Police Officer.  
4 So I've experienced the issue we're talking about  
5 today at the state level as a user, and now as a  
6 Federal manager, so, you know, a wide variety of  
7 touches on this subject.

8           The U.S. has pushed hard to fully resolve  
9 the problems that keep responders from being able to  
10 communicate with whom they need to when they need to.  
11 Per our legislative mandate, the Department of  
12 Homeland Security has driven the national effort to  
13 improve emergency communications for our public safety  
14 and first responders, enhancing operability,  
15 interoperability , and continuity of mission critical  
16 voice, video, and data communications for the people  
17 that we depend upon every day to save lives.

18           We have aggressively moved forward to  
19 integrate broadband and next generation technologies  
20 into the National Emergency Communications Plan, we  
21 have increased technical assistance that directly  
22 targets state and regional goals, we have created  
23 senior level coordinating bodies such as the Safecom  
24 Executive Committee and Emergency Response Council,  
25 and most recently the Emergency Communications

1 Preparedness Center.

2           These groups have already moved forward to  
3 remove key interoperability barriers, and we are  
4 working to coordinate all facets of emergency  
5 communications. Public safety communications  
6 interoperability is a complicated issue that has  
7 changed over time as technology and cultural shifts  
8 enable greater capabilities. One thing I've  
9 experienced first hand is that interoperability in  
10 emergency communications, the problem is 90 percent  
11 coordination, 10 percent technology.

12           Broadband is one such tool that has added a  
13 whole new dimension to communications. It can greatly  
14 enhance the abilities of emergency responders to  
15 accomplish their missions. However, our focus on  
16 training and exercises, standard operating procedures,  
17 and proper governance, all these activities we call  
18 the coordination activities, is just as relevant for  
19 the new technologies as it is to existing LMR  
20 technologies, as it will be for future technologies  
21 that haven't even been invented yet.

22           The public safety community has been using  
23 wireless broadband applications for some time, working  
24 to understand how these data tools complement mission  
25 critical voice capabilities. Some of you in this room

1 have been working on the development of a public  
2 safety broadband network for over a decade, and it's  
3 our responsibility to ensure that we deploy this  
4 smartly. The Emergency Response Interoperability  
5 Center, ERIC is one way to help us do this in a  
6 coordinated way.

7 Already DHS has partnered with the FCC to  
8 begin the process of establishing ERIC to adopt and  
9 enforce standards for a public safety broadband  
10 network. To demonstrate our commitment we are already  
11 strengthening our governance structures, advisory  
12 groups, and grants and technical assistance mechanisms  
13 that will ensure the national network meets public  
14 safety's needs. We look forward to working closely  
15 with the public safety community and the FCC to make  
16 this network a reality. Thank you. And next I would  
17 like to introduce Jeff Goldthorp of the FCC.

18 MR. GOLDTHORP: Thank you Chris. Jamie was  
19 saying I think that the FCC is as committed as we've  
20 ever been to the vision of a nationwide public safety  
21 network. Times change and our methods change. Let's  
22 talk for a minute about the facts on the ground today,  
23 and then we'll get into ERIC and what we have in mind  
24 for ERIC, how we think ERIC can help bring about this  
25 network that we aspire to.

1           First of all, we're seeing around us today  
2   the deployment with vigor of a new generation of  
3   wireless technology, 4G technologies, in the  
4   commercial realm, and the 700 MHZ band is happening as  
5   we speak today. And the deployment of these  
6   technologies give public safety an opportunity to  
7   benefit from the features and the functions that come  
8   with them as it relates to broadband. Also gives  
9   public safety the benefit of a whole different cost  
10  platform than what public safety has been accustomed  
11  to. So there are benefits, rich benefits that come  
12  with the deployment and the emergence of a new  
13  generation of commercial wireless technology.

14           The second item is that as we look around us  
15  now, a number of public safety jurisdictions are very  
16  interested in moving forward now, today, in deployment  
17  of broadband public safety networks in their  
18  jurisdictions, that's a fact. So the question we have  
19  to ask ourselves is, is it possible for us to create a  
20  seamless, interoperable, broadband nationwide network  
21  -- that is, a network of networks, not a homogeneous  
22  network, the one that we had imagined a few years ago,  
23  but a network of networks -- is that possible?

24           Absolutely it's possible, it's been done  
25  before, and it can be done again. It may not have

1     been done in public safety before, I'm not thinking  
2     about public safety in the instance I had in my mind  
3     right now, but it has been done and it can be done,  
4     there's no technical reason why it can't be. So we  
5     have to decide, what do we need to do to help make  
6     that happen? And that's where ERIC fits in.

7             There is a need for an entity to try and  
8     harmonize the actions of public safety entities as  
9     they go forward in this new quest. Where those  
10    actions need to be harmonized to enable  
11    interoperability, that's the role of ERIC. ERIC's  
12    functions will tend to be technical in nature, as I'll  
13    describe in a moment, operational in nature. But the  
14    general idea is to try and harmonize the actions of  
15    actors that wouldn't necessarily otherwise be  
16    harmonized where that needs to happen.

17            The Emergency Response Interoperability  
18    Center will be formed at the FCC to do two things.  
19    First of all to adopt technical and operational  
20    framework to enable interoperability for public safety  
21    broadband networks, and second of all to apply and  
22    enforce those requirements by way of whether it be FCC  
23    rules or whether it be license and lease requirements  
24    or whether it be grant conditions. So there's those  
25    two aspects to what we see ERIC and the FCC doing to

1 try and make this happen, to try and bring this all  
2 together.

3 ERIC is going to be working collaboratively  
4 with our Federal partners and with the public safety  
5 advisory committee that we'll be setting up with the  
6 folks that are sitting here, with the OEC at DHS on  
7 matters such as outreach and best practice  
8 development, with NIST on the identification,  
9 development, and participation and standards bodies  
10 and verification, testing and validation. We're also  
11 forming a advisory committee with public safety to  
12 advise us on matters that are knowledgeable to  
13 practitioners in that space. So we're not doing this  
14 alone, we're doing this in partnership with public  
15 safety and with our Federal partners.

16 We can see ERIC getting into a number of  
17 specific areas right off the bat. Some of them Jamie  
18 mentioned, but let me just touch on them now. I'm  
19 sure they'll come up later and we can spend a little  
20 bit more time. One that obvious one is, when you've  
21 got a first responder that is responding to a scene of  
22 an event in a different jurisdiction, needs to  
23 communicate not only with responders on the scene but  
24 even to have access to services and applications back  
25 at home.

1           So there's a need for roaming and a need for  
2 first responders to be able to move about between  
3 jurisdictions in a way that we're not as accustomed to  
4 today. So roaming, and that's a technical issue as  
5 well as an operational issue. Technical requirements  
6 are needed and operational requirements are needed.  
7 There needs to be interconnectivity between the  
8 networks of the different public safety jurisdictions  
9 that are being set up. Those networks need to be able  
10 to talk to each other, connect to each other,  
11 communicate with each other. And that is sort of a  
12 feature or a function that underlies roaming, you  
13 can't have roaming if networks aren't interconnected.  
14 So that's necessary, and maybe requirements for that.

15           Priority access is another that Jamie  
16 mentioned. We envision a world where public safety  
17 will have access not only to its own spectrum in the  
18 band and the 700 MHz band, but to possibly other  
19 commercial carrier spectrum in that band, and that  
20 would require some requirements for priority access --  
21 how does public safety access, how do first responders  
22 access those bands, and what are the technical  
23 requirements for doing that.

24           And then the final one that I'll mention  
25 today, a category of requirements are security

1 requirements. So, for example, authentication, when  
2 you enter a new or go to another jurisdiction, how do  
3 you join that network? How does the network know that  
4 you are who you say you are? What's the identity  
5 management protocol to do that? And that's the  
6 authentication problem that needs to be solved for  
7 this problem.

8 And also encryption, and that'll be the last  
9 one that I'll mention today. For security purposes  
10 there needs to be some common standard for encryption.  
11 If everybody's encrypting their communications  
12 differently then nobody except the folks that are  
13 local will be able to unencrypt them and use them. So  
14 that's just sort of a snapshot of the things that we  
15 see ERIC doing.

16 We see this stuff, or these requirements,  
17 rolling out over the months to come, and we're looking  
18 forward to working with the folks here and with all of  
19 you to make this happen. I'm eager to move forward  
20 with this as I'm sure all of you are as well, and I  
21 thank you for your time today. I'll turn it over now  
22 to Dereck Orr of NIST.

23 MR. ORR: Thanks, Jeff. Real quickly, my  
24 name is Dereck Orr, I'm the Program Manager of Public  
25 Safety Communications Systems at the National

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1 Institute of Standards and Technology. I am also the  
2 Program Manager for the Public Safety Communications  
3 Research Program out in Boulder, Colorado, where we  
4 run a joint program between NIST, NIST's Office of Law  
5 Enforcement Standards, and NTIA's Institute for  
6 Telecommunications Sciences. And what I'm here to  
7 talk about today -- are these mics going in and out?

8           What I'm here to talk about today is, one,  
9 for people who aren't familiar with us, because we are  
10 kind of out in the hinterlands out in Boulder, we are  
11 focused on public safety requirements, standards, and  
12 helping public safety understand how technologies  
13 address their specific public safety needs. That's  
14 what we've done for over a decade now, and that's our  
15 particular focus. And so the evolving issue of  
16 broadband for public safety is a perfect issue for us  
17 and one we're very interested in, and we've been  
18 working along with our public safety partners for a  
19 while now in figuring out how best we could help  
20 public safety prepare for this new wave of technology,  
21 which is the broadband network.

22           And so what we've determined is, as public  
23 safety has really kind of congealed around the idea of  
24 LTE as a standard that they want to embrace for  
25 broadband, LTE is a bleeding edge technology, I

1 wouldn't even say it's a cutting edge technology, it's  
2 a bleeding edge technology that even from a commercial  
3 perspective not many people have any familiarity with  
4 or knowledge of. And so there are some pilots and  
5 demonstrations occurring around the world right now  
6 for LTE focused primarily, as you would expect, on  
7 commercial applications and use. There's nobody  
8 looking about how this new technology is going to work  
9 and apply for public safety's specific needs and  
10 requirements.

11           So what the Public Safety Communications  
12 Research Program is going to do in Boulder, and it's  
13 actually going to be announced tonight in a published  
14 Federal Register Notice that comes out tonight, is  
15 that we are proposing the development of a  
16 demonstration network in Boulder Colorado using our  
17 Table Mountain radio free quiet zone to work with any  
18 interested manufacturer or vendor or industry  
19 participant to put together a demonstration LTE  
20 network and actually look at it from the perspective  
21 of public safety's specific requirements and  
22 applications so that public safety can understand  
23 exactly how this new cutting edge technology is going  
24 to work for their specific purposes.

25           We don't want to recreate anything that's

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1     going on in commercial tests, we want to have this be  
2     focused specifically on public safety applications and  
3     services. So issues, core issues, to public safety,  
4     and one reason they looked at LTE, is priority access.  
5     Well how is that going to work? And let's run through  
6     some public safety scenarios and see how this works so  
7     public safety is well grounded when this stuff is  
8     deployed in their jurisdictions and have level set  
9     expectations of what they're going to get from this  
10    technology. That's the whole purpose of the  
11    demonstration project.

12           We're looking for open research, we want the  
13    outcome to be open to all, we want this to help and be  
14    beneficial to the ERIC. As obviously a consumer of  
15    this information, we want to work closely with the  
16    PSST, our public safety associations. We will be  
17    utilizing as a core document the NPSTC public safety  
18    broadband requirements document to drive what we're  
19    going to look at from an application and services  
20    perspective. So we really are looking for this to be  
21    a very open research demonstration project.

22           So I appreciate the opportunity today to  
23    give people a heads up on this so that you understand  
24    what we're going to be doing out in Boulder, and we're  
25    I'm sure going to be collaborating with a lot of

1 people in this room, or I hope to be. So look for the  
2 Federal Register Notice tonight, and it'll announce  
3 the first meeting and also announce how interested  
4 industry participants can begin to contact us and  
5 participate in the program. So thank you very much,  
6 and I'm going to turn this back to Jennifer.

7 MS. MANNER: Thank you very much, Dereck.  
8 And I'd like to also extend my welcome to all of you  
9 for attending today. ERIC will not be successful  
10 unless we have the input and the support of public  
11 safety, our Federal partners, and industry, so we  
12 really appreciate you being here today to share your  
13 insights with us. I got the lucky job of moderating  
14 this event, so I'm going to lay out the ground rules  
15 for folks, and we are very much looking forward to  
16 hearing what you have to say.

17 We've had eleven people preregister to make  
18 remarks, so we're going to go in the order that  
19 they've signed up for remarks, so I'll call each one  
20 up individually. Deandra over here -- raise your  
21 hand, Deandra -- is our timer. And just to make sure  
22 we have enough time to get through everyone, Deandra  
23 will be running the clock. We'd ask our speakers to  
24 speak from the podium over there and to actually talk  
25 directly into the microphone just so everyone can hear

1     what you're saying.

2                 You'll have about three minutes to make your  
3     remarks, and then our panel over here, which is really  
4     made up of folks who have been integral to the  
5     creation of ERIC, are here to respond, answer  
6     questions, and talk to you a little further about  
7     ERIC, and let me just run through who is at this  
8     table. First we have Ziad Sleem from the FCC. Dereck  
9     Orr you've already met from NIST. Jeff Goldthorp from  
10    the FCC, Behzad Ghaffari from the FCC, David Furth  
11    from the FCC, and Chris Essid from DHS, and of course  
12    Jamie Barnett.

13                What I would also ask is that our speakers  
14    when they stand up if they could please state their  
15    name and identify themselves just so everyone knows  
16    who they are. Following this, depending on our  
17    timing, we may open the floor to questions, but it'll  
18    really depend on how much time the discussion and the  
19    presentations take. So with that, I'd like to call up  
20    our first speaker, Harlin McEwan.

21                MR. MCEWAN: Thank you, Jennifer. I am  
22    Chief Harlin McEwan, I am Chairman of the Public  
23    Safety Spectrum Trust, and I'm also Chairman of the  
24    Communications and Technology Committee of the  
25    International Association of Chiefs of Police. I

1 speak today on behalf of the Public Safety Spectrum  
2 Trust, the nationwide 700 MHz public safety broadband  
3 licensee. The PSST has long supported all efforts  
4 that will lead to the expeditious deployment of a  
5 nationwide, interoperable, wireless broadband network  
6 for public safety.

7           The PSST has worked closely with all public  
8 safety groups to establish a collaborative process and  
9 a consensus position on these issues to better advance  
10 our common goals. We welcome the opportunity to work  
11 with the FCC on the ERIC proposal in order to enhance  
12 these efforts to best meet public safety's critical  
13 needs. The ERIC proposal does raise some difficult  
14 questions and concerns, however, and which we hope do  
15 not become impediments to public safety's urgent need  
16 for the long awaited interoperable wireless broadband  
17 network.

18           The PSST questions whether ERIC may be  
19 taking on a broader mission than necessary. Given how  
20 long we have waited, we fear any efforts that may  
21 further complicate our goal of bringing robust and  
22 reliable broadband services to the public safety  
23 community. In addition, we question whether the  
24 proposed ERIC framework may create some duplicative  
25 activities and responsibilities that could

1       inadvertently hinder the development of wireless  
2       broadband services that meet public safety's needs.

3               For example, do the new ERIC boards and  
4       committees have missions that overlap substantially  
5       with existing active organizations? Notably, we are  
6       concerned that the proposed public safety advisory  
7       board, which the FCC says will be broadly  
8       representative of the public safety community, will be  
9       drawing on the limited volunteer resources of the  
10      PSST, the National Public Safety Telecommunications  
11      Council, and the Safecom Executive Committee as an  
12      example.

13             Do some of the proposed responsibilities for  
14      ERIC duplicate efforts that have already been  
15      addressed by public safety and industry members,  
16      including interoperability frameworks, technical  
17      standards, roaming and priority service? Such efforts  
18      have already been submitted for the record. Does the  
19      current proposal undo years of preparation and  
20      essentially start from scratch? And finally, while  
21      the PSST supports and encourages the FCC to work with  
22      other Federal government agencies to expedite network  
23      deployment, would additional layers of interagency  
24      involvement create new challenges and impediments?

25             Would the proposed ERIC structure impose new

1       bureaucratic Federal requirements as each agency seeks  
2       to play a role? Do DHS, NIST, and TIA, DOJ, and other  
3       Federal agencies, with their own Federal spectrum  
4       resources and needs, share the same sense of urgency  
5       as the state and local public safety agencies in  
6       deploying this network? The PSST appreciates the  
7       opportunity to participate in this forum and hopes to  
8       work closely with the FCC to address the questions  
9       raised today. We need to do this right, but we need  
10      to start down the path with a streamlined, efficient  
11      operation, and as quickly as possible. Thank you.

12               MS. MANNER: Thank you. Do any of our  
13      panelists here have anything, responses or comments?

14               MR. MCEWAN: Am I supposed to stay up there?

15               MS. MANNER: It's up to you, it's  
16      discretionary.

17               MR. FURTH: We're not going to deprive you  
18      of the podium, Harlin.

19               (Laughter.)

20               MR. FURTH: Maybe I can just lead off. And  
21      again, I'm David Furth, Deputy Chief in the Public  
22      Safety Bureau. And Harlin I think raises a number of  
23      extremely good questions, which are questions that we  
24      have been asking and talking to public safety and  
25      others about, and in fact that's one of the reasons

1     that we're having this forum is to come up with the  
2     right answers to precisely the questions that Harlin  
3     has asked, because we want to avoid duplication, we  
4     don't want to create an unnecessary layer of  
5     bureaucracy.

6             We are looking for a way to put ERIC into  
7     the role that we see as essential with respect to  
8     creating and fostering and continuing to foster an  
9     environment that will support interoperability, but  
10    leveraging existing resources, the resources that the  
11    public safety licensee brings to bear, that the public  
12    safety community brings to bear, that industry,  
13    standards setting bodies bring to bear.

14            All of those, our Federal partners, I think  
15    as the statements that have been made here have  
16    underscored, we're looking to take advantage of all of  
17    those, so that what ERIC can provide is a framework,  
18    and that is really what ERIC is intended to provide is  
19    a framework, both to create it and then to maintain it  
20    over time because we're talking about a technological  
21    environment when we're talking about broadband that is  
22    not static, it's anything but static, and so we need  
23    to have a framework that can evolve as technology  
24    evolves.

25            And I think that Harlin has asked good

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1 questions about exactly how we should structure the  
2 advisory committees. We certainly see that public  
3 safety needs to play a critical advisory role, and we  
4 don't want to duplicate existing effort or create  
5 additional burdens on already strained public safety  
6 resources. So one of the things that we're interested  
7 in from this forum as well as from dialogue that we've  
8 had is in figuring out the best way to accomplish just  
9 that. With that, if others on the panel have  
10 comments?

11 MS. MANNER: Jeff please.

12 MR. GOLDTHORP: Yeah, I just wanted to  
13 comment on one specific aspect of what you said,  
14 Harlin, because I also thought you were right on  
15 target in this area as well, and that is, I think one  
16 of the hardest technical challenges that ERIC faces is  
17 deciding -- to strike the right balance between a set  
18 of requirements that are at once detailed enough to  
19 enable interoperability, to establish the right  
20 framework for interoperability, without being so  
21 detailed that they somehow unnecessarily inhibit the,  
22 you know, local control and how, you know, folks want  
23 to do things within their own jurisdiction, it's that  
24 are things that are fine to do that have nothing to do  
25 with interoperability.

1           So the challenge, one of the challenges, the  
2   technical challenge for ERIC is to strike that  
3   balance. It's been done before. And the analogy that  
4   I'm thinking of, that I promised Jennifer I wouldn't  
5   use, but I'm going to do it anyway because I think it  
6   really is a good analogy, and that is it's been done  
7   and it's been done with the Internet. And the thing  
8   that makes the Internet beautiful is the simplicity of  
9   the protocols.

10           The TCP/IP protocols are elegant in their  
11   simplicity. They allow operators of autonomous  
12   systems to do whatever they want in their networks,  
13   carriers that are operating autonomous systems that  
14   connect to the Internet, can do whatever, they can  
15   move traffic around using whatever protocol they want,  
16   as long as they're communicating with their peers  
17   using standard Internet IETF protocols. Well it's the  
18   same model here, and the challenge is not to burden  
19   the requirements with too much complexity and more  
20   than is necessary. Less is better here.

21           MS. MANNER: Thank you. Unless -- I can  
22   give you a minute, Harlin, but we need to move on.

23           MR. MCEWAN: I just want to thank you. I  
24   appreciate your response, and I believe that's exactly  
25   the tone of what I'm trying to say is that we've all